

THE GAP IN OPERATION AND MAINTENANCE OF THE AFGHAN NATIONAL  
SECURITY FORCES INFRASTRUCTURE

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## ABSTRACT

THE GAP IN OPERATION AND MAINTENANCE OF THE AFGHAN NATIONAL SECURITY FORCES INFRASTRUCTURE, by MAJ Martin Ramos, 75 pages.

Approximately \$11.7 billion has been spent to provide the Afghan National Security Forces (ANSF) with the infrastructure required to meet their training and operational requirements. There are increasing indicators that the Government of the Islamic Republic of Afghanistan (GIROA) does not have the technical capacity or resources to maintain and operate ANSF infrastructure. This study focuses specifically on ANSF infrastructure due to the importance of infrastructure to operational readiness and ANSF retention. The purpose of this study is to determine the requirements for funding and technical capacities for ANSF infrastructure operations and maintenance (O&M). After this is determined, this study focuses on identifying the projected capacities for O&M at the end of 2014 within GIROA. The projected difference between the required and existing O&M capacity in Afghanistan are then compared. After determining the gap between the projected requirements and projected capacity, recommendations are provided to close the gap.

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## ACRONYMS

A-ITAG	Afghan Infrastructure Training Advisory Group
ANA	Afghan National Army
ANP	Afghan National Police
ANSF	Afghan National Security Forces
CAAT	Contracting Advise and Assist Teams
CENTCOM	Central Command
CSTC-A	Combined Security Transition Command - Afghanistan
DoD	Department of Defense
DoS	Department of State
EC	European Commission
ENG	NTM-A Engineer Directorate
Exelis	ITT Exelis Systems Corporation
FE	Facilities Engineer
FY	Fiscal Year
GDP	Gross Domestic Product
GIRoA	Government of the Islamic Republic of Afghanistan
GSU	Garrison Support
ISAF	International Security Assistance Force
ITAG	Infrastructure Training Advisory Group
NTM-A	NATO Training Mission Afghanistan
O&M	Operations and Maintenance
PCO	Primary Contracting Officer
SIGAR	Special Inspector General for Afghanistan Reconstruction



SRM	Sustainment Restoration and Modernization
SY	Solar Year
TAD	Transatlantic Division
TAN	Transatlantic Division-North
TAS	Transatlantic Division-South
TCN	Third Country Nationals
USACE	United States Corps of Engineers
USAID	United States Agency for International Development
VTTS	Vocational Technical Training School

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## CHAPTER 1

### INTRODUCTION

The problem for a foreign power – even one as benign as the United States – has never been how to get in to Afghanistan, as the events of 2001-2002 proved. Governing, controlling or even trying to help the country have always been far more difficult. Indeed, disaster seems to wait for armies that linger too long in the Hindu Kush. ... as the Americans assessed Afghanistan after their six-month campaign, the true puzzle became what they were planning to leave behind.

— Tanner, *Afghanistan: A Military History from Alexander the Great to the Fall of the Taliban*

#### Background

The North Atlantic Treaty Organization (NATO) led International Security Assistance Force (ISAF) will complete a comprehensive transfer of security operations to the Afghan National Security Forces (ANSF) under the leadership of the Government of the Islamic Republic of Afghanistan (GIROA). According to the official NATO website, “The aim is for Afghan forces to have full responsibility for security across the country by the end of 2014. This target was set at the 2010 NATO summit in Lisbon and confirmed by allied leaders at the Chicago Summit in May 2012” (NATO 2013).

The ANSF consists of both the Afghan National Army (ANA) and the Afghan National Police (ANP).<sup>1</sup> In order for the ANSF to continue developing their capabilities, they must have adequate billeting, administrative and training facilities. The United States tax payers have funded \$11.7 billion worth of construction for ANSF infrastructure

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<sup>1</sup>The ANP consists of several other organizations. They include the Afghan Border Police (ABP), the Afghan Uniform Police (AUP), the Afghan Highway Police (AHP), and the Criminal Investigation department. All of those organizations fall under the Ministry of Interior (MOI) (Radin 2011).

(SIGAR 2012, 1). The total construction effort is at various stages. Many projects have been completed, some are in progress and a small amount of projects are planned.

However, all construction is expected to be completed before the end of 2014.

The lead agent for ANSF long term facility construction has been the United States Army Corps of Engineers (USACE).<sup>2</sup> According to the USACE Transatlantic Division (TAD) website, the mission of the USACE districts in Afghanistan is to,

Construct facilities that contribute to the fielding of Afghan National Army and Afghan National Police units – referred to as Afghan National Security Forces. The districts are constructing provincial and district police headquarters facilities, regional administration buildings for the Ministry of Interior, training areas, army bases, hospitals, and joint regional compounds. The program also includes teaching the Afghans how to operate and maintain their facilities, thus enabling them to ensure their facilities remain mission ready.

USACE receives priorities and executes ANSF infrastructure planning guidance from NATO Training Mission Afghanistan (NTM-A) and the Combined Security Transition Command - Afghanistan (CSTC-A).<sup>3</sup>

The primary source of funding for ANSF infrastructure construction and operations and maintenance (O&M) is the Afghanistan Security Forces Fund (ASFF).

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<sup>2</sup>The official USACE website states that USACE TAD was created on September 29, 2009 in order to provide a central USACE division headquarters for the construction effort in the CENTCOM area of operations. The TAD is the immediate headquarters element for the TAN and TAS, which are the two USACE districts operating in Afghanistan. In addition to these two districts, the TAD also inherited the Middle East District. The TAD changed its task organization to meet changing priorities once the construction effort for USACE changed from OIF to OEF. Although TAD is also the main construction agent for facilities supporting U.S. forces, the priority beginning in 2011 became ANSF infrastructure to support the transfer of authority to GIRoA.

<sup>3</sup>NTM-A's mission is as follows: NTM-A/CSTC-A, in coordination with NATO nations and partners, international organizations, donors and non-governmental organizations, supports the government of the Islamic Republic of Afghanistan in generating and sustaining the ANSF, develops leaders, and establishes enduring institutional capacity to enable accountable, Afghan-led security (ISAF November 2012).

The ASFF was established by Congress in 2005. From fiscal year (FY) 2002 to 2005 funding for ANSF development was administrated by the Department of State (DoS). In 2005, Congress appropriated the first ASFF exclusively to build ANSF capacity to fight terrorism. This appropriation was part of the Emergency Supplemental Appropriation Act for Defense. The ASFF is authorized for use in procuring supplies, services and equipment for the ANSF. Additionally, the ASFF is used to train ANSF personnel (McFarland 2013).

NTM-A/CSTC-A is responsible for submitting the budget request to Congress. The request is based on the requirements for ANSF for the upcoming year. Generally speaking, the amount of money appropriated for the ASFF for the FY is based on the end strength, that is the total number of personnel, for ANSF forces. The request is a single document that consolidates material, training, equipment and fielding needs for the ANSF. A budget for infrastructure development and O&M of facilities for the ANSF is also included in the request. Table1 illustrates the ASFF funding level versus the ANSF total end strength per FY.

Table 1. ANSF End Strength Goals and Effects on Funding Levels									
Fiscal Year	2005	2006	2007	2008	2009	2010	2011	2012	2013
ANSF Total End Strength	132,000	132,000	152,000	216,000	226,000	305,600	352,000	352,000	352,000
ASFF Funding Levels (in billions)	\$1.285	\$1.908	\$7.406	\$2.750	\$5.607	\$9.167	\$11.619	\$11.200	\$5.749

Source: Ed McFarland, “Afghanistan Security Forces Fund (ASFF)-The Past Present And Future,” *Defense Institute of Security Assistance Management (DISAM) Journal of International Security Cooperation Management* (February 2012), <http://www.disamjournal.org/m/articles/afghanistan-security-forces-fund-asffthe-past-present-and-future-860> (accessed February 27, 2013).

The ASFF funding level depicted in table 1 includes all construction for ANSF infrastructure. The bulk of ANSF infrastructure construction was executed between 2009 and 2012. The portion of ASFF funds that were allocated for ANSF construction included O&M funds for O&M of existing and completed ANSF facilities. The exact amount that was allocated for infrastructure construction and O&M of facilities will be detailed in chapter 4 of this study.

One of the most important facets of the total functionality of infrastructure upon completing construction is the O&M of the facility. Often, the cost of maintaining a facility can surpass the construction costs in the lifespan of the structure. There is also a need for a capable and available work force to execute the O&M of the facility. There are indicators that the people of Afghanistan may not possess the requisite technical skills or funds to maintain the ANSF infrastructure past 2014 (SIGAR 2012, 19).

#### Thesis Statement

This study investigates the existing capacities in GIRoA for operation and maintenance of ANSF facilities, as there is a projected gap between the required fiscal and technical capacity and existing capacities in Afghanistan. The United States has contributed approximately \$11.7 billion to construct the critical infrastructure required for the ANSF to continue building capacity. This includes billeting, administrative and training facilities in order to provide the ANSF with locations to develop the capacity to defend their country. Many of these facilities have been completed on schedule and are currently occupied. However, there is mounting evidence that the Afghan government does not possess the financial and technical capacity to maintain and operate ANSF facilities after 2014 (SIGAR 2012, 19).

### Purpose

The purpose of this study is to determine the requirements for funding and technical capacities for ANSF infrastructure operations and maintenance (O&M). After this is determined, this study focuses on identifying the projected capacities for O&M at the end of 2014 within GIRoA. The research focuses only on the operation and maintenance of the existing facilities or those that are scheduled for completion by 2014. Additionally, this study identifies and details the programs already in place or proposed by the United States and NATO to ensure the facilities do not degrade to an unusable state. Finally, this study includes recommendations based on lessons learned throughout the investigative process.

### Significance

The results of this study provide important insight into the future of the security capacities of Afghanistan. In order for any security force to be effective they must have functioning garrison and training areas. Construction of administrative and training areas continues to progress throughout Afghanistan. The infrastructure is critical to the readiness of the ANSF. However, if these facilities are not maintained properly, this will result in reduced effectiveness of the administrative and training support to the forces which can reduce ANSF readiness. Furthermore, improper maintenance of the facilities and reduced ANSF readiness can lead to a reduction in the ability of the ANSF to provide security to the people of Afghanistan.

Lack of facility maintenance affects ANSF readiness by influencing retention of personnel. Specifically, degraded facilities and poor living conditions affect attrition rates of the ANA and the ANP. According to a report from the ISAF Public Diplomacy



Division from October 2011, the ANSF long term security capabilities are significantly predicated on reducing attrition rates for both the ANA and the ANP. Admittedly, poor infrastructure alone does not lead to high ANSF attrition rates.<sup>4</sup> However, during the author's deployment in 2011, commanders communicated that many Afghan soldiers and police officers leave the ranks during the winter due to lack of adequate heating or lack of protection from the elements.<sup>5</sup> The ANSF also require satisfactory work and training areas. If facilities degrade or are not operated properly this could have a negative effect on attrition and recruiting. This in turn could lead to degrading capacities and capabilities of ANSF to secure their country from internal and external enemies.

Additionally, lack of facility maintenance affects the ability of the ANSF to provide security to the people of Afghanistan. According to NATO, one of the keys to long term success in Afghanistan is to prevent the country from becoming a safe haven for terrorists once again. If the Afghan people cannot secure their own country, there are major implications for the United States and NATO. The success and proficiency of the ANSF are tied to their resourcing. One of those critical resources is the infrastructure from which the security forces can operate and train efficiently. Therefore, it is vital for GIRoA to have the operation and maintenance capacity to sustain a fully functional ANSF infrastructure throughout all of Afghanistan.

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<sup>4</sup>According to the Anthony H. Cordesman, in *Afghan National Security Forces, What will it Take to Implemented the ISAF Strategy*, poor leadership and corruption are also key factors in ANSF attrition.

<sup>5</sup>The author was deployed as the Facilities and Construction Chief in the Division Engineer cell of the First Cavalry Division Headquarters as part of Regional Command – East in support of OEF 11-12 from May 2011 to April 2012.

This study provides an in-depth look at the capacity needed for ANSF security forces infrastructure, and assesses the existing capacity. This includes analyzing contributing factors to the success the engineer branch has had in developing O&M capacity in the ANSF. The author presents recommendations for sustainability and/or improvement of the existing capacity. Additionally, this study makes recommendations for possible implementation in other future operations.

### Definitions

Afghan National Police (ANP). The ANP refers to all of the ANSF that are under the Afghanistan Ministry of Interior (MOI). The other elements under the ANP include the Afghan Border Police (ABP), the Afghan Uniformed Police (AUP), the Afghan Highway Police (AHP) and the Criminal Investigation Department (CID).

Afghan Right. It is a term to define structures or functions of structures that are sustainable with existing Afghan capabilities. This term does *not* imply that the quality of the facility is not high. Additionally, this term will refer to construction that is right for the Afghans in accordance with cultural preferences. For example, latrine facilities include a location for washing feet, as Afghan Muslims wash their feet prior to praying.

Capacity. For the purposes of this study, this term does not refer to the capacity of individual structures. Capacity only refers to the capacity of GIRoA to operate and maintain buildings or the capacity of ANSF to provide security for the entire nation.

Capacity Building. There is a distinct difference in this study between capacity building and capacity development. Often the two terms are used interchangeably. However, in this study, capacity building is defined as starting from nothing and building the entire process or system needed to build O&M capacity.

Capacity Development. This term refers only to the development of the capacity within an existing system. For example, there are already systems in place for ANSF infrastructure O&M. However, these systems lack the personnel or long term funding to ensure the system will be sustainable into the foreseeable future.

End Strength. This term refers to the total number of people in the ANSF.

O&M. This term refers to the operation and maintenance of facilities.

Off Budget. Public expenditures or revenues that are not in GIRoA's budget.

These expenditures or revenues are not distributed through GIRoA.

On Budget. Public expenditures or revenues that are in GIRoA's budget. These expenditures or revenues are distributed and accounted for by GIRoA.

Security Expenditures. On and off budget public expenditures provided to pay, train, equip and build infrastructure for the Afghan National Security Forces. These expenditures do not include U.S. or NATO forces.

Task Order. An order for services placed against an established contract or with government sources.

Third Country Nationals. Foreign workers supporting U.S. efforts in Afghanistan. Third country nationals (TCNs) perform many tasks from daily janitorial duties to maintaining waste water treatment plants.

### Assumptions

1. The transfer of authority (TOA) and security will occur as scheduled by the end of 2014. According to the declassified version of NATO OPLAN 10302, the desired end state for Afghanistan is, "a self-sustaining, moderate and democratic Afghan government, in line with the relevant [United Nations Security Council Resolutions] UNSCRs, able to

exercise its authority and to operate throughout Afghanistan, without the need for ISAF to help provide security” (Coelmont 2009, 14). Though some details required to meet the end state for NATO in Afghanistan have not been clearly defined, NATO continuously maintains their commitment executing the TOA no later than the end of 2014.

2. There will be a limited presence of NATO forces in Afghanistan after 2014. As of the publication of this study, the exact number of personnel that will remain in Afghanistan has not been determined. In a *Wall Street Journal* article dated March 13, 2013, General James Mattis, the head of U.S. Central Command (CENTCOM) and James Cunningham, the U.S. ambassador to Afghanistan, recommended keeping 13,600 American service members in Afghanistan after the 2014 deadline. However, President Barack Obama’s administration supports troop levels ranging from 8,000 to 12,000. As of March 2013, the White House was still considering options for troop levels after 2014 and the president had not made a decision on the final number (Nissenbaum 2013, A13).

3. Due to assumption two, there will not be any U.S. personnel assigned to continue developing O&M capacity in the ANSF. Until there are a clearly defined number of U.S. troops that will be operating in Afghanistan after 2013 and the mission and operational priorities for said forces are published, it will be impossible to know what if any importance will be given to developing O&M capacity in Afghan forces. However, it is reasonable to assume that priorities will be given to training ANSF on security and counterterrorism missions, not on developing facilities maintenance capacity.

4. The ANSF force strength at the end of 2014 will be approximately 352,000. Though that is the projected end strength, there is the possibility GIRoA may not be able to reach that end strength if recruiting goals fall short or attrition is too high. For the

purposes of this study, the end strength for ANSF forces will be assumed to be 352,000 at a minimum from 2014 to 2017.

5. The ANSF force strength will be cut from the current size of 352,000 to approximately 230,000 troops after 2017.

### Limitations

1. Due to the classification of some of the current data, there are limitations to identifying the current capacity of existing ANSF elements being trained for O&M of facilities. However, research will be done on the authorized equipment and personnel of ANSF.

2. Due to the potential cutbacks in the budget throughout the U.S. government, there may be some limitations on the exact amount of funds that will be allotted for O&M of ANSF facilities beyond what has already been appropriated. Additionally, there may be fluctuations in the amount of funds appropriated for ANSF through the ASFF.

3. The inability to access or interview Afghans currently training to build capacity in GIRoA limits the consideration or inclusion of an Afghan perspective on the issue.

4. Throughout this study, it became difficult to get accurate numbers for ANSF personnel. NTM-A is enforcing that ANSF report personnel numbers through internal systems. The accuracy of the reporting has proven to be a challenge. Therefore, in this study the numbers provided by NTM-A were used as the basis for all analysis.

### Delimitations

1. The shortage of facilities required for ANSF is not part of this study. There is no indication that a shortage does exist. However, if an issue of facilities shortages was identified, it was not included in this study.

2. This study focuses only on ANSF infrastructure. No other infrastructure to support GIRoA functions was researched. Although indicators show that a lack of O&M capacity will impact both ANSF and civil infrastructure, this study was limited only to the impact of O&M capacity on ANSF infrastructure.

3. The focus of this study was the projected capacities and capabilities for ANSF infrastructure after the TOA in 2014. The current capacity was used as a baseline for comparison and projection purposes.

4. Due to the large amount of NGOs operating throughout Afghanistan, it is necessary to focus solely on data from two entities, NATO and the Department of Defense. Therefore, all other government agencies assisting GIRoA with rebuilding the war torn country were not part of this study.

5. The required amount of O&M capacity for ANSF infrastructure is constantly changing due to the fiscal realities of the United States. Additionally, as of the current date of publication of this thesis, there are negotiations between NATO and GIRoA to determine the total number of facilities that will require O&M and the number of personnel necessary to execute maintenance on those facilities.

6. The Afghan Air Force (AAF) infrastructure was not be part of this study. There is a great deal of uncertainty for the AAF. As a matter of fact, there is no data for sustaining AAF facilities at all in the ASFF for FY 2013.

7. For the purposes of this study, the security situation in Afghanistan was limited to the effects on ANSF infrastructure development, O&M capacity development and funding for O&M of ANSF infrastructure.

8. Irregular fuel deliveries do affect O&M capacity. However, analyzing the impact of fuel deliveries was beyond the scope of this study.

## CHAPTER 2

### LITERATURE REVIEW

#### Overview

As the date for the official transition of security operations to the ANSF from ISAF approaches, the information about this very contemporary topic is constantly growing in both volume and accuracy. For the purposes of this study, the literature review began by examining the broad historical context through books on the history of warfare in Afghanistan. The next level of research focused on current efforts to establish security in Afghanistan primarily through NATO's strategy and end state.

Once the end state for Afghanistan was obtained from the official NATO web page, the ISAF mission in support of the end state was investigated. The next step focused strictly on ANSF infrastructure efforts by NTM-A/CSTC-A and USACE. The USACE TAD website provided the mission statement for TAD efforts in Afghanistan which included developing O&M capacity within GIRoA. NTM-A/CSTC-A developed several initiatives to improve and/or develop O&M capacities within the ANSF and at the MOD and MOI levels. This information was gathered from Special Inspector General for Afghanistan Reconstruction (SIGAR) reports, Department of Defense (DoD) Inspector General (IG) reports and through unclassified ISAF documents.

#### Background

Stephen Tanner's, *Afghanistan: A Military History from Alexander the Great to the Fall of the Taliban*, and Robert Johnson's, *The Afghan Way of War*, provided a historical perspective on the history of warfare in Afghanistan. Both of these authors



provided background information that was critical to understanding the challenges for creating stability in Afghanistan from a historical perspective. These books did not provide any specific details on the current security challenges affecting stability and construction operations. However, the works did present a foundation for the problems in generating human capital in Afghanistan. The challenges facing ANSF infrastructure O&M capacity are a reflection of the difficulty in developing Afghanistan after thousands of years of war.

Chapter 1 of this study sets the foundation for the need for current O&M requirements for ANSF infrastructure. Two articles within the official NATO website provided the end state for NATO led ISAF in Afghanistan. The first article, “Inteqal [the Dari and Pashtu word for transition]: Transition to Afghan lead,” last updated in April 2013, referred to two NATO summits as the sources for the end state in Afghanistan. The two summits were the Lisbon Summit from 2010 and the Chicago Summit in May 2012. The author was then able to access the declaration from the Chicago Summit. This thesis includes funding and effort commitments made in the Chicago Summit. In the NATO article, “Chicago Summit Declaration on Afghanistan,” allies committed to providing \$4.1 billion per year for funding ANSF infrastructure O&M through 2017.<sup>6</sup> The declassified version of NATO OPLAN 10302 also provided more details on the end state for Afghanistan. The end state for Afghanistan in the OPLAN was more expansive and detailed than the statement from the NATO summits. However, they both express that security operations will be transferred from ISAF to the ANSF.

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<sup>6</sup>O&M in this statement refers to funding the operations and maintenance of the all ANSF requirements. This does not refer specifically to O&M of ANSF infrastructure.

The mission for NTM-A/CSTC-A was located on the ISAF unclassified official website under the Subordinate Commands link. In addition to the NTM-A/CSTC-A mission statement, the ISAF website had other general information for the training mission in Afghanistan. For example, information about areas of responsibility, contributing nations and major assigned units was available on the main ISAF website.

The USACE TAD website was an invaluable source for the overall construction effort in Afghanistan and for ANSF infrastructure O&M development specifically. The website provided the TAD mission in Afghanistan. The mission encompasses all construction efforts for permanent ANSF construction and developing O&M. In addition to an overview, there were articles on the progress of the transition of responsibility for the ANSF. In Paul Giblin's article, "Corps of Engineers Transfers O&M to Afghans," he details USACE efforts in assisting MOD in developing the Vocational Technical Training School (VTTS). There were many articles on the efforts to transfer ANSF infrastructure O&M to the Afghans. Mark Ray's article, "USACE Supports O&M at Joint Regional Afghan National Police Center," details the transfer process of O&M responsibility to the ANSF once USACE has ensured a facility is fully functional. The article also briefly expands on current efforts to lower the complexity of facilities in order to make them easier for Afghans to maintain.

The author used three sources to identify the structure and authorized personnel for ANSF forces. C. J. Radin published the "Afghan National Forces Order of Battle" in the *Long War Journal*. "The Afghan National Order of Battle" included both the ANA and ANP overall force structure and major units. A second source provided an understanding of the ANSF's task organization, the Global Security website. This

website has a visual organizational chart depicting the ANA corps with corresponding brigades. The third source was the ANA Tashkil which was used by the author to verify the information from the first two sources.<sup>7</sup> The Tashkil was not available through the NTM-A/CSTC-A website due to domain restrictions in their system. However, the author received the unclassified document from Mr. Richard Hinson, a civilian engineer contractor working in the Regional Command East (RC-E) in Afghanistan.

The final source used in the background portion of this thesis discussed the ASFF. In Ed McFarland's, *Afghanistan Security Forces Fund (ASFF)–The Past Present and Future*, the author was able to gain an overview of the funding for ANSF infrastructure. This Defense Institute of Security Cooperation Management article provided the history of the ASFF. It also included details about the justification and appropriation process for the ASFF. Table 1, located in chapter 1 of this thesis, was sourced from Ed McFarland's journal entry. The table illustrates the relationship between ANSF end strength and the ASFF funding levels. After analyzing table 1, the author was able to see a direct correlation between the increases in the ASFF and the increase in ANSF infrastructure construction from 2009 to 2012.

### Analysis of the Literature

In the analysis section of this thesis, government reports and USACE data were used to develop the study. SIGAR 13-1, *Afghan National Security Forces Facilities: Concerns with Funding Oversight, and Sustainability for Operation and Maintenance*,

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<sup>7</sup>A tashkil is similar to the U.S. Army Modified Table of Organization and Equipment (MTOE) for the ANSF. The ANA Tashkil delineates the authorized personnel and equipment for the army. The ANP tashkil delineates the authorized personnel and equipment for the AUP, ABP, AHP, and CID.

provided data obtained from NTM-A/CSTC-A, USACE and ITT Exelis Systems Corporation (Exelis) on the status for capacity development within the ANSF. Two other SIGAR audits also provided recent history on developing ANSF infrastructure O&M capacities. SIGAR Audit 11-6, *Inadequate Planning for ANSF Facilities Increases Risks for \$11.4 Billion Program*, and SIGAR Audit 10-12, *ANP Compound at Kandahar Generally Met Contract Terms but Has Project Planning, Oversight and Sustainability Issues*, contained data that provided three different sources for comparison between three separate reports. The author used these reports to collect data and identify issues affecting ANSF infrastructure O&M capacity development.

In addition to the SIGAR audits, DoD IG reports were used to obtain data. DoD IG Report DODIG-2012-104 and DODIG-2012-028 provided information on the development of the facilities engineer (FE) sections within the garrison support units (GSU). Combining the information from the SIGAR reports, DoD IG reports and USACE news releases, the author was also able to research initiatives currently in place to develop ANSF infrastructure O&M capacity. For example, Karla Marshall's article, "Building Afghanistan: U.S. Army Corps of Engineers at work," provided an overview of the transition process for O&M responsibilities to the ANSF. All of these sources support the capacity development efforts for ensuring the ANSF are capable of maintaining their infrastructure after they assume O&M responsibility. Brenda Beasley's article, "Working Group Conference Participants Achieve Operational Concept for ANSF Facility Turnover," expanded on the initiatives being executed by USACE, the Infrastructure Training Advisory Group (ITAG) and Exelis.

The three main sources used in this thesis for researching the fiscal capacities for ANSF infrastructure O&M within GIRoA were the Department of Defense (DoD) budget for fiscal year (FY) 2013 titled *Justification for FY 2013 Overseas Contingency Operations Afghanistan Security Forces Fund (ASFF)*, the Center for Strategic and International Studies testimony to the House Armed Services Committee titled *The Uncertain Role of the ANSF in Transition: Establishing Real World Metrics*, and the World Bank's report titled *Afghanistan in Transition: Looking Beyond 2014, Volumes 1 and 2*. The ASFF document for FY 2013 provided details on the total amount of money that is appropriated by Congress for ANSF infrastructure. Within the details there is also a line detailing what funds are specifically allocated to ANSF infrastructure O&M.

The World Bank's study, *Afghanistan in Transition: Looking Beyond 2014*, was instrumental in projecting the funding capacity for GIRoA. The study took into account all of the fiscal realities for GIRoA. There were no specific projections for ANSF infrastructure O&M. However, there were details on the projected budget shortfalls for O&M of all ANSF. These projections included all operational costs for the ANSF. However, the author was able to reach the required conclusion based on the overall ANSF costs.

## CHAPTER 3

### RESEARCH METHODOLOGY

#### Research Design

This chapter explains the research design used for this study and includes an overview of how the data was collected, organized and analyzed. The research method used in this thesis is qualitative. The structure presented below was used to complete this study.

1. Research and identify the O&M capacity and funding requirements through 2013.
2. Identify the current capacities and funding for O&M of ANSF infrastructure through 2013.
3. Research current programs for developing O&M capacity to include existing and projected funding streams, in addition to the known funding commitments made by NATO.
4. Research the projected capacities and funding for ANSF O&M within GIRoA after 2014.
5. Identify the projected shortages in expected capacity versus required capacity, both technical and fiscal.
6. Develop recommendations or possible solutions for meeting any identified shortages.

In step one, the capacities and funding required for meeting the O&M needs were collected from USACE as they have the most current data for overall construction of ANSF infrastructure. During step two, various government reports were used to identify

the current capacity of the O&M capabilities for ANSF infrastructure within GIRoA. The primary sources for this step were the SIGAR report from October of 2012 and the *Progress toward Security and Stability in Afghanistan* report to congress from January 2009. These two reports among others served as the foundation for researching the current O&M capacity for GIRoA.

This step was broken down into two categories. The first category identified the requirements for personnel and training while the second identified the current funding requirements for maintaining ANSF infrastructure. The author anticipated the second category would be difficult to determine due to the difficulty in locating an accurate breakdown of how funds are distributed for ANSF. There are multiple sources that provide the overall funds requirement. However, the author anticipated a lack of reliable data to determine what percentage of the funds would be allocated specifically to ANSF infrastructure maintenance. Therefore, the author used data from existing USACE contracts to estimate the funding requirements. The author analyzed and compared data from the ASFF FY 2005-2013 to the existing data from the USACE contracts.

Step three required the use of current data and graduation rates from various programs currently in place as delineated in step one. Additionally, the author researched the quality of the programs for creating the necessary O&M capacity. These programs include those developed by USACE and contracted to civilian contractors. Furthermore, any current development at the ministry level was investigated in order to determine if GIRoA can develop internal capacity to contract out O&M. This portion of the investigation sought to identify funding programs or future potential funding streams internal to Afghanistan. During this step, the future capacities were projected for 2014.

Step four consisted of an evaluation based on how the facilities were maintained and the quality of O&M by GIRoA. This was done using data from USACE and NTM-A/CSTC-A. After analyzing this data, the author was able to analyze the feasibility of continuing with the current method of executing O&M. This allowed the author to conclude whether or not current systems are sustainable in the future. This step had a significant impact on the author's conclusions and recommendations.

In step five, the required capacity and funding was compared to the projected data. The projected data include any new or developing programs that are anticipated to be in place after 2014. These programs include a mixture of USACE developed and contracted training programs. The effectiveness of the programs was thoroughly researched. The capacity building portion of this step was very broad. For example, the author presents initiatives that are currently in place, but may not be active after 2014.

In step six, the author proposed solutions and recommendations for building further O&M capacity in GIRoA. This information is presented in chapter 5 of this study. This step incorporated and/or modified some of the recommendations made by SIGAR and the DoD IG. Additionally, the author will recommend modifications to current programs administered by contractors and USACE. The central theme for these recommendations is to ensure any programs that are recommended are sustainable through the troop drawdown of 2014.



## CHAPTER 4

### ANALYSIS

#### Required O&M Technical Capacity and Funding Requirements through 2013

##### Introduction

It is very difficult to determine the exact required capacity for ANSF infrastructure due to the changes in the total number of facilities that will be built for the ANSF. According to a NATO media background sheet, “Discussions on the future size and cost of ANSF are currently ongoing between the international community and the Afghan authorities” (ISAF December 2012). However, there are various estimates that provide a base for the personnel and funding requirements.

##### Personnel and Training Requirements

The most tangible data available for infrastructure O&M requirements were available from NTM-A. According to the most recent SIGAR report at the time of the publication of this study, there are a total of 3,627 facilities that need to transition to ANSF responsibility for O&M requirements. As of September 2012, 1,840 of these facilities had been transferred to ANSF control (Report to Congress 2012, 101). That leaves approximately 49 percent ANSF facilities under ISAF control for O&M. Transferring half of the required facilities to ANSF control in two years time will be challenging given the difficulties ISAF has encountered in developing O&M infrastructure capacity within the ANSF and GIROA.

At the same time, it is important to note the requirement for trainers of O&M personnel for ANSF infrastructure. There is a requirement to establish 18 sites for

training according to USACE contract numbers W912ER-10-D-0002 and W912ER-10-D-003.<sup>8</sup> These 18 vocational training sites will be established by Exelis. According to Albert Soliz, the USACE TAS chief of O&M, "This program will teach them the fundamentals in critical skilled trades, including electrical, plumbing, heating and cooling, power generation, carpentry, as well as facilities management" (Marshall 2012). This requirement would also apply to all of the sites throughout Afghanistan in accordance with both contracts. These training sites are not to be confused with data listed in table 1 that requires training sites for both southern and northern Afghanistan.

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<sup>8</sup>Contract number W912ER-D-10-0002 covers the northern part of Afghanistan, while contract W912ER-D-10-0003 covers the southern part of Afghanistan. The details of these contracts will be discussed in further detail step 2 of this study. For step 1 the key is that these contracts call for 18 training sites to be established for developing O&M capacities for ANSF personnel. Only 9 of the 18 sites were established by the end of the first year. The table only shows 17 sites because the 18th training site had not been established as of the publication of DODIG-2012-104.

Table 2. ANSF Vocational Training Status		
ANSF Site	Region of Afghanistan	DATE ITT Implemented Vocational Training
Contract Base Year		
Vocational School	North	January 2011
Camp Sayar	South	January 2011
Camp Hero	South	March 2011
Camp Darulaman	North	April 2011
Kabul Military Training Center	North	April 2011
North Kabul International Airport	North	April 2011
Camp Commando	North	May 2011
Parsa	North	May 2011
National Military Hospital	North	May 2011
Contract Option Year		
Gamberi	North	September 2011
Shaheen	North	September 2011
Konduz	North	September 2011
Pol-e Charki	North	September 2011
Gardez	North	November 2011
Jalalabad	North	November 2011
Kabul Logistics Acquisition Center	North	November 2011
Ministry of Interior	North	November 2011

Source: IG, US DoD, *Report Number DODIG-2012-14* (Arlington, VA, June 18, 2012), 6.

These sites were not established in accordance with the original contract. All 18 sites were to be established by April 2011. However, the critical factor in this table is the required sites required to build O&M capacity of ANSF personnel in the base year of the contract. These sites were not established in the agreed upon time frame. Details for the total number of sites established versus the site required will be presented in step 2 of this study. Originally the contracts called for 40 training sites. The timeline for establishing the 40 training sites was not made clear in the original contracts. Therefore, the only sites

that could be enforced as of June 2012 were the 18 sites specifically required in the base year of the contracts (Inspector General 2012, 4). Details about the sites established and those not established during the base year are analyzed in the subsequent section of this study.

The final requirement for the purposes of this thesis is the amount of ANSF personnel authorized for O&M. There are 23 of 24 authorized conventional combat brigades fielded in the ANA. In addition, there is one special operations brigade and two commando brigades (Global Security 2012). Each brigade has a GSU; the GSU is responsible for sustaining all life support for their unit. They must provide base security, operate dining facilities and execute fuel operations and storage. Within the GSU there is a FE section. The FE section is responsible for all facilities maintenance of the unit (Inspector General 2011, 132).

There are 65 to 80 personnel assigned to each brigade for facilities maintenance. The total number authorized for each conventional brigade varies according to the size of the unit and the area the brigade is assigned to secure (SIGAR 2012, 9). Therefore, the calculated requirement for total personnel trained on ANA infrastructure for the 24 conventional brigades is between 1,625 and 1,920 personnel.<sup>9</sup> This number is significantly lower than the NTM-A numbers. According to NTM-A the total requirement for ANA O&M positions is 2,567 and 1,022 for ANP (SIGAR 2012, 5-6).

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<sup>9</sup>The author highlights this number because it will be the priority recommended for filling O&M positions in the recommendation section of this study. The ANA combat brigades do not have the same access to contractors as the brigades in Kabul do. Additionally, the recommendation will be for the commando brigades and the special forces brigade to develop MoD level contracts for infrastructure maintenance to lessen the burden on ANA personnel.

The discrepancy for the ANA numbers can be attributed to the fact that the author's calculations do not include the non-conventional brigades. At the time of the publication of this study, the author was not able to obtain the raw data from NTM-A for analysis.

### Funding Requirements

Locating funding requirements for ANSF infrastructure O&M is difficult to isolate. There is a great deal of data and estimates for operations and maintenance of ANSF as a whole. The primary source for determining the funding requirements for ANSF infrastructure O&M requirements was the ASFF funds for FY 2013. Table 3 and table 4 exhibit the O&M funding requirements for the ANA and ANP.

Table 3. ANA Facilities Sustainment Request (Dollars in Thousands)			
	FY 2011	FY 2012 Enacted	FY 2013 Request
Facilities SRM and O&M	\$245,179	\$163,224	\$227,043
Site Improvements and Minor Construction	\$51,700	\$244,836	\$145,471
Total	\$296,879	\$408,060	\$372,514

*Source:* Office of the Department of Defense, *Justification for FY 2013 Overseas Contingency Operations Afghanistan Security Forces Fund* (Washington, DC: Government Printing Office, February 13, 2012), 35.

Table 4. ANP Facilities Sustainment (Dollars in Thousands)			
	FY 2011	FY 2012 Enacted	FY 2013 Request
Facilities SRM and O&M	\$109,046	\$108,026	\$132,220
Site Improvement and Minor Construction	\$33,490	\$119,150	\$184,000
Total	\$142,536	\$227,176	\$316,220

*Source:* Office of the Department of Defense, *Justification for FY 2013 Overseas Contingency Operations Afghanistan Security Forces Fund* (Washington, DC: Government Printing Office, February 13, 2012), 64.

The funds in table 3 and table 4 illustrate the amount of funds out of the yearly ASFF that NTM-A/CSTC-A requested in order to maintain ANSF infrastructure per year. According to the justification explanations for appropriation of these funds, 4,800 ANP facilities will be supported at more than 500 police installations for the ANP. The ANA funds support more than 8,000 structures located at various installations throughout Afghanistan. In table 3 and table 4, sustainment, restoration, and modernization (SRM), along with O&M can only be used to upgrades to existing facilities. Meanwhile, the site improvements and minor construction sums refer to the restoration or modernization of structures (U.S. Department of Defense 2012, 35). The key element of this portion of the ASFF is that these dollars cannot be used for building new infrastructure; the money can only be used to restore and sustain existing facilities.

### Current O&M Technical and Funding Capacity

#### Introduction

The current O&M capacity for ANSF infrastructure is limited. Many U.S. government audits have identified a shortage in the technical capabilities of Afghans as a whole and specifically ANSF O&M personnel. According to a SIGAR testimony to the U.S. House of Representatives, “The United States is building infrastructure and launching programs that the Afghan government has neither the financial nor technical ability to operate and maintain” (SIGAR 2013). Also, GIRoA is only providing approximately six percent of the Afghan total security expenditures. That amounts to only \$1.513 billion of the \$24.742 billion that was spent on Afghan security expenditures

from solar year (SY)<sup>10</sup> 2005 to SY 2010<sup>11</sup> (Government Accountability Office 2011, 13). Consequently, if the 6 percent contribution for GIRoA stayed consistent for SY 2012 and remains consistent for SY 2013, there are obvious shortfalls in the ANSF capacity to generate funds for their own security. There are clearly very limited funds provided by GIRoA to address their security needs and in turn, for the ANSF O&M infrastructure.

Human capital is also an issue when developing technical capabilities. When the U.S. troop surge was executed in Afghanistan, most of the combat experienced troops had deployed to Iraq. However, human capital in Iraq is much different than in Afghanistan. Iraq is a middle class country with solid infrastructure and vast oil reserves. Meanwhile, Afghanistan is a very poor country with virtually no middle class (O'Hanlon 2008). The author surmises that many individuals within the construction communities were surprised at the lack of human capital that existed in Afghanistan outside of the largest cities.

Finding quality personnel to develop into capable operators and maintainers in Afghanistan has proven to be difficult. One of the central problems with finding trainable personnel is the low literacy rate among Afghan adults. According to the Central Intelligence Agency (CIA), the *World Fact Book* webpage states the literacy rate in Afghanistan for adult males over the age of 15 is 43.1 percent. Therefore, the pool from which the ANSF can draw from must first be taught to read before they can execute any

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<sup>10</sup>SY refers to the official calendar in Afghanistan. The calendar is based on the vernal equinox. The Afghan New Years is roughly on or about March 21st of each Gregorian calendar year.

<sup>11</sup>As of the publication of this study the GAO had not published comparative figures for GIRoA expenditures for SY 2011 or SY 2012.

O&M tasks that require understanding plans or schematics. The only tasks an illiterate ANSF soldier would be able to execute would be basic labor and repairs.

One of the other problems with building capacity in Afghan personnel relates to the actual construction of some of the ANSF facilities. When the concerted effort began for ANSF infrastructure, the designs for barracks and supporting facilities were based on Western standards. In an interview with the Center for a Better Life, Michael Scarano, USACE Deputy for Programs and Project Management for TAS, stated “What we found in the past is that we were designing to Western standards, which are entirely unsustainable by the local population. Those first barracks for Afghan troops were very similar to what we would have done for our own troops.” Although this problem was noted early on in the development of facilities, there are many facilities that were built to Western designs.

Compounding the problem was the lack of long range planning for ANSF infrastructure. As of January 2011, there was not a comprehensive plan for building the required facilities to support the mission of the end strength mission of the ANSF (SIGAR 2011, 9). Similarly, as early as June 2010, there was not a clear view of the strategic plan for ANSF infrastructure. There was not a clear end state for ANSF infrastructure requirements in the early onset of major construction operations. There was no comprehensive plan for infrastructure or sustaining the facilities supporting the ANSF (SIGAR 2010, 13). Without a clear end state, it was very difficult to know how much O&M capacity would be needed from within the ANSF to ensure the long range sustainability of facilities.



## Personnel and Training Capacities

As of September 2012, 1,787 facilities remained to be transferred to ANSF control.<sup>12</sup> All of the structures still to be transferred are currently maintained under USACE supervised contracts. They will remain under the two nation-wide contracts mentioned in the first step of this study. Under this arrangement, the Primary Contracting Officer (PCO), USACE- is the only entity that can execute a task order against the established contracts (SIGAR 2012, 12). In other words, the ANSF do not maintain any portion of the buildings covered under the contract. Should an ANA or ANP soldier identify a minor repair in his room or in a structure at his facility, he cannot request the discrepancy be repaired. The two O&M contracts do not allow for any ANSF capacity to maintain any of the buildings yet to be transferred.

The GSUs in both the ANA and ANP have difficulties filling their authorized O&M positions. The NTM-A Engineer Directorate (ENG) reported that as of July 2012, the ANA had filled only slightly more than 40 percent of their 2,567 authorized positions. The ANP had an even lower percentage. Out of the 1,022 authorized O&M positions, the ANP had only filled 321 positions, only 31 percent. Even more troubling, there were only 431 individuals in the hiring process for the ANA, while the ANP only had two people in the hiring process (SIGAR 2012, 5-6).

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<sup>12</sup>According to SIGAR report 13-1, the relationship between a site, facility and buildings/structure is as follows: a site may consist of several facilities, with each supporting a different mission. For example, at an ANP Joint National Training Center there may be an AUP regional HQ, an ABP zone HQ and a Regional Logistics Center. Each of those facilities supports a different mission for the ANP. Meanwhile, a facility may have many different building or structures. For example, an army Regional Logistics Center has barracks, a dining facility and the warehouses for storage and distribution of supplies.

Compounding the capacity issues for O&M, many of the individuals who filled these positions had limited experience and a low ceiling for training. Some of the sites near large population hubs, for example Kabul, do have individuals who can be trained to maintain more technical facilities like waste water treatment plants or water supply systems. However, at any of the other ANSF locations, TCNs perform O&M of technically sophisticated infrastructure such as power generation. These facilities are critical to the functionality of any ANSF location. O&M for critical facilities requires individuals with high skills and experience. This also requires that anyone maintaining infrastructure of this complexity must be able to work independently. In SIGAR Audit 13-1, Exelis officials stated, “an individual must be able to read O&M and technical manuals and blueprints in order to operate power and waste water treatment plants.” However, most Afghan personnel supporting ANSF infrastructure are not able to do this. Currently, there is a shortage of qualified personnel for developing full O&M capacities within the ANSF (SIGAR 2012, 6).

The supply system for parts needed to repair facilities can also impact O&M capacity.<sup>13</sup> Initially, the primary issue affecting procurement of spare and repair parts was creating a reliable funding stream from MOD. Through some partnered guidance from ENG, MOD resolved the budgeting shortages for O&M of the limited number of buildings that were under Afghan responsibility. Meanwhile, MOI did not allocate any funds specifically for O&M until March 2012. Due to the lack of funds, many MOI FEs

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<sup>13</sup>The logistical issues are prevalent throughout ANSF. In a report to Congress, Report on Progress Toward Security and Stability in Afghanistan, it states, “Overall, the various Afghan logistical processes and organizations, regardless of proficiency level, do not operate as one national logistics system in an integrated and cohesive manner” (U.S. Congress 2012, 62).

did not have critical tools or equipment to execute O&M. Part of the funds allocated in March of 2012 were designated to resolve a tools shortage issue in order to build O&M capacity within the ANP (SIGAR 2012, 7). However, due to the inefficiencies in the MOI logistical system, there is no clear time frame specifying when such tools will be available.

Even after resolving the allocations of funds issue, the ANSF must also resolve the logistical problems in receiving spare parts, repair parts and specialty tools. The logistical system throughout the ANSF is very slow, cumbersome and bureaucratic. The MOD supply system is very centralized, leading to a long supply request to supply delivery time (SIGAR 2012, 7). Similarly, the MOI has an eight step process that makes it difficult if not impossible to receive any requests for parts, O&M or otherwise. U.S. mentors to the ANP have shared a high level of frustration in the supply requisition and issuance system (Cordesman 2010, 78). If a part is not received on time or is not in stock, it results in a delay in repairing the building or facility, which may in turn lead to further deterioration of the infrastructure and more maintenance problems.

The final capacity researched in this chapter is the ANSF's ability to training internally. The author did not find any internal mechanism within the ANSF for O&M training. All of the training for developing O&M capacity is executed by USACE with direction from NTM-A/CSTC-A. USACE manages and Exelis executes the two O&M contracts for ANSF infrastructure. These two contracts call for training of ANSF personnel on O&M capabilities. Though Exelis does have Afghans working on maintenance for the contract, the Afghan workers do not work directly for the ANSF.

They execute maintenance in accordance with the direction their employer, Exelis, gives them.

Exelis was required to provide a train-the-trainer program as part of the two O&M contracts awarded to the company in July 2010. Due to some insufficient language in the contract, the performance standards were not met. The contractor was required to create the program and the program would have had to produce five Afghan trainers per year. However, there was no language specifying the level of training or the performance measures to be used for qualifying the individual as an Afghan trainer.

The five trainers per year metric did not provide enough detail to truly provide the ANSF with quality trainers per year. As of December 2011, the train-the-trainer program for southern Afghanistan has not been implemented because the training plan presented by Exelis to USACE had not been approved. The train-the-trainer program for northern Afghanistan has been implemented. However, according to DODIG Report number DODIG-2-12-10 stated “USACE officials at the time of our review still had not updated the contracts with measurable performance standards to determine whether the contractor’s performance in training ANSF students to their tashkil-designated classification level is acceptable.” Therefore, the current approved training of Afghans on O&M infrastructure in northern Afghanistan may or may not be able to execute O&M maintenance or develop ANSF O&M capabilities internally.

### Current Funding Capacity

Dependence on external financing—aid or other financial inflows—is nothing new for Afghanistan: it received massive amounts of Soviet aid in the 1980s and early 1990s; it was one of the highest per capita aid recipients in the world during the 1960s and 1970s; Afghan rulers received subsidies from Britain during much of the 19<sup>th</sup> century; and in its earliest years plunder from the Indian

subcontinent was a main source of financing for the Afghan state. Historically, the regime rarely had to mobilize large revenues from its own people to cover costs and provide services, so this aspect of the social contract between state and society has long been missing. Instead, the historical pattern was often to use external resources to “buy loyalty” and provide security and political stability. (World Bank 2012a)

Afghanistan has long depended on foreign aid. Most of the aid to GIRoA is related to donations for Afghan security. However, civilian aid is also high. In 2010, of foreign aid to Afghanistan was nearly the same as their GDP. The foreign aid sent to Afghanistan can be classified under three basic categories. For example, in 2010, GIRoA received approximately \$1.9 billion classified as budget support. They also received \$5.2 billion in external budget contributions. These funds are managed by civilian aid agencies such as United States United States Agency for Internal Development (USAID) and the European Commission (EC). The third and final type of foreign aid is security-related. In Afghanistan, these funds are used to support the ISAF mission. These funds totaled \$8.6 billion in 2010. The current level of aid is extremely high and is 98 percent of Afghanistan’s GDP (World Bank 2012b, 46). Figure one demonstrates the increased dependency on growing aid in Afghanistan from FY 2002 to FY 2010.

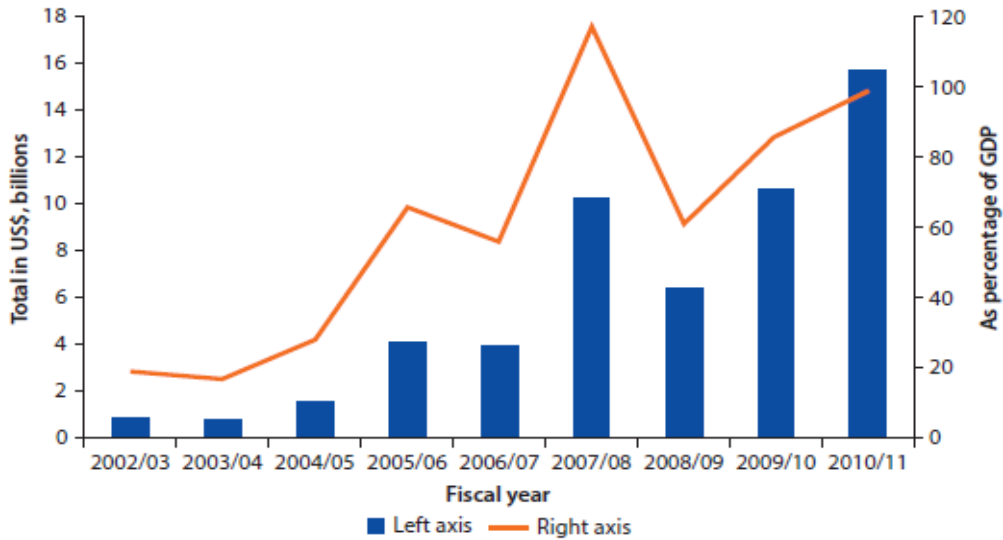


Figure 1. U.S. Donations as a Percentage of GDP

Source: World Bank, *Afghanistan in Transition: Looking Beyond 2014*, vol 2 (Washington, DC: World Bank Open Knowledge Repository, May 2012), 54.

Though the high level of aid has improved the lives of many Afghans, it has also led to aid dependency by GIRoA and has perpetuated mismanagement and corruption. Additionally, Afghanistan's budgetary needs for providing basic services and life support to their citizens exceeds the country's ability to generate public revenue (World Bank 2012b, 47). This has a significant impact on budgetary capacity for security and specifically for ANSF infrastructure O&M. As of the publication of this study there were no internal mechanisms within GIRoA for providing funds supporting O&M of ANSF infrastructure.

## Current Programs for Developing Technical Capacity and Funding

### Introduction

The three primary vocational training entities for O&M of ANSF infrastructure is Kabul's Facility Engineer Vocational and Technical Training School (VTTS), ITAG and Exelis. VTTS is a joint effort between USACE and Exelis. ITAG is composed of military personnel. While Exelis is a civilian company operating under USACE, which is contractually obligated under contract numbers W912ER-10-D-002 and W912ER-10-D-0003, to provide vocational training at certain ANSF infrastructure sites. These two entities focus specifically on developing technical skills of ANSF personnel for O&M of ANSF facilities. However, according to the DoD IG Report No. DODIG-2012-104 from June 18, 2012, "Vocational training provided under the two Afghanistan operations and maintenance contracts did not effectively develop ANSF infrastructure maintenance capabilities" (SIGAR 2012, 3-4).

### USACE

USACE supports the ISAF mission for developing ANSF infrastructure O&M capacity within the ANSF through two O&M contracts. The lead for Afghan engineer capacity development is NTM-A. However, USACE executes both contracts on behalf of NTM-A. Typically, USACE provides O&M through the contracts for a period ranging from 6 to 18 months. The contracts serve to provide O&M to completed ANSF facilities until the ANSF at each location are prepared to execute O&M of the infrastructure. The intent of the O&M contracts is to ensure facilities are fully functional and are transferred in good working order to the ANSF.

USACE has completed approximately 365 construction projects with more than 8,000 buildings completed. In addition, there are about 305 construction projects in various stages of completion consisting of approximately 3,000 buildings. As of the publication of this thesis, USACE predicts 95 percent of the facilities will be completed and transferred to the ANSF prior to December 2014. The remaining projects are scheduled for completion by June 2015. There will be a small number of facilities under USACE O&M control after June 2015. USACE does have the capacity to provide O&M services through 2016. Regardless of the December 2014 target date, USACE is prepared to continue providing ANSF infrastructure O&M until the ANSF is prepared to assume O&M responsibilities.<sup>14</sup>

USACE also provides on the job and limited classroom training through the O&M contracts. This training is only a small portion of the overall initiatives enacted by NTM-A. USACE provides training at specific sites, and this ensures the ANSF assigned to provide O&M at those facilities are prepared to assume O&M responsibilities. Although there are challenges and at times the transitions at specific sites have not gone smoothly, USACE is confident in the ability of the ANSF to execute O&M after the facilities are turned over to Afghan control. USACE will continue to execute training and ensure all transferred facilities are fully functional when turned over to the ANSF.

USACE also played a key role in developing austere construction standards for ANSF infrastructure. Based on lessons learned during the initial stages of ANSF constructions, ISAF, NTM-A/CSTC-A and USACE made a decision to implement

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<sup>14</sup>Personal communication between the author and Derya Stickley, USACE Deputy for Transatlantic and Northatlantic Regional Integration Team.



austere construction standards for ANSF facilities. In Karla Marshall's article, "Building Afghanistan," Fred Schelby, a USACE TAS program manager stated, "The new standards not only provide a quality build, but increase the ability for the Afghans to maintain their facility without assistance from the coalition or international organizations" (Marshall 2012). In a separate *Washington Post* article titled, "In helping Afghanistan build up its security forces, U.S. is trimming the frills," by Joshua Partlow, COL Mario A. Trevino, a NATO engineer in Kabul stated, "We're teaching them something that's a lot simpler, and certainly they understand." Austere designs were not used in the initial stages of ANSF construction. However, USACE worked directly with ISAF and NTM-A/CSTC-A to reduce the complexity of engineer designs in order to make O&M more feasible for the ANSF to execute.

## VTTS

VTTS opened its doors on January 24, 2011 with an initial class of 60 students. Exelis will oversee the training at the school and managed the school's curriculum. The course is a six month long immersion in various trades necessary for O&M capacity. Additionally, 52 of the 60 students from the first graduating class will go directly to support ANA infrastructure maintenance, while eight students will support ANP facilities. The school represents a huge symbol of cooperation between USACE, CSTC-A and the ANSF. One of the most important facets of this school is that it was ANA Brigadier General Habibullah's, Chief of Construction Management Property Division, vision. U.S. Navy CPT Frank Vaccario, NTM-A ENG deputy director for ministerial development said, "We created General Habibullah's vision to create a centralized school for technical training for all civilian engineers. We will pull students from all over

Afghanistan to give them an environment free to do nothing but learn. The students will go back to their facilities as trained and qualified facility engineers” (Magill 2011).

On March 18, 2012, VTTS celebrated the graduation of its second class of O&M trainees. USACE officials continued to work with VTTS faculty to ensure the quality of the curriculum will meet ANSF infrastructure maintenance needs. The school’s program of study was based on curriculum taught in the United States at the Air Force’s operations and maintenance program. The quality of training at VTTS is geared towards providing O&M skills required to maintain the types of facilities that were built by USACE for the ANSF (Giblin 2012). The training is extensive and immersive. The school takes six months to complete and produced 116 graduates in its first two classes. By enrolling in the school, ANSF personnel can focus on training on their specific trade. As opposed to training at an ANSF site, where their commander may or may not allow them to attend training.

## ITAG

According to the ITAG Campaign Plan in SIGAR audit 13-1, ITAG’s mission is, “to provide training, mentorship, and synchronization of O&M efforts at ANSF sites in order to ensure ANSF-led facility sustainment.” ANSF must be able to maintain their infrastructure after the official transition of security responsibility to the Afghans. NTM-A/CSTC-A developed ITAG as a military advisory group responsible for training, mentoring and facilitating O&M at ANSF sites. ITAG was also charged with creating and executing a plan for transitioning O&M responsibility of ANSF infrastructure to the Afghans. One of the key components of this strategy is training oversight (SIGAR 2012,

6). However, ITAG has encountered many issues with developing technical capacities within ANSF.

One of the biggest challenges faced by ITAG is a severe shortage in personnel. Due to the shortage in personnel, ITAG was not able to implement their strategy for developing maintenance capacity in the ANSF. ITAG officials expected 222 personnel by the end of 2012. Based on these numbers, ITAG developed a phased plan to deploy mentor teams to 115 of the approximately 348 ANSF sites from 2011-2013. As part of the transition of O&M responsibilities to the Afghans, ITAG planned an 18 month transition period for ANSF sites. However, due to the manpower shortage, ITAG had to revise their plan and lower expectations (SIGAR 2012, 8). The change in plan could potentially leave many ANSF facilities without capable personnel to maintain infrastructure.

ITAG received only 141 of the projected 222 personnel. That total was not expected to increase due to pending troop reductions. Based on these adjusted force structure, ITAG determined they would only send mentor teams to 58 sites (SIGAR 2012, 7). In a report to Congress on progress toward security and stability in Afghanistan, the ITAG number was updated. According to this report from December 2012, the ITAG number of personnel had grown to 125 by June 2012. However, the number was reduced to 76 in September 2012 due to the phased draw down of U.S. forces<sup>15</sup> (U.S. Congress 2012, 101).

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<sup>15</sup>According to SIGAR report 13-1, the number of ITAG personnel was further reduced to 63 at the end of September 2012.

The fluctuation in the number of ITAG personnel forced changes in the original ITAG strategy. Based on the original number of 348 ANSF the reduction in ITAG coverage would leave 290 sites without coverage. Admittedly, some of these sites are most likely austere and ITAG presence would be better served at larger sites with more complex facilities. However, the ITAG force was reduced to 63 percent of their original expected force. Meanwhile, the planned sites for ITAG coverage were reduced by half.

The reduction in ITAG coverage was reduced by several factors, not just the overall number of ITAG personnel. Some of these factors included the total number of buildings at certain sites, security at various sites and the lack of coalition presence (SIGAR 2012, 7). These factors are very credible and undoubtedly, ITAG personnel currently deployed have a better understanding of the operational environment. However, due to circumstances beyond their control, ITAG is not planning on covering 57 of the sites originally scheduled for ITAG presence.

ITAG mentors and trainers have been successful in implementing training where possible. They have also identified issues with availability of ANSF personnel for training. During an assessment of six sites, ITAG discovered only 110 of the approximately 300 authorized tashkil personnel were available for training. Some ANSF commanders stated there were not enough personnel authorized by the tashkil and that they would only allow half of the enrolled personnel to attend O&M training (SIGAR 2012, 7). The problem was two-fold; first, there was a shortage in the tashkil authorization for ANA O&M personnel within the GSUs. Second, due to operational requirements, many ANSF commanders were reluctant to allow their O&M personnel to attend the required training.

The original authorization of ANSF maintenance personnel was not sufficient to provide O&M prior to 2011. Therefore, MOD with assistance from CSTC-A, developed a drastic increase of authorized maintenance personnel to the tashkil. The 1389 Tashkil, the personnel and equipment authorization for SY 1389, only authorized 24 maintenance personnel at sites. This number increased to 65 to 80 personnel depending on the complexity and size of the site. This increase in the authorized number of personnel should be enough to provide facilities O&M at most sites (SIGAR 2012, 9). However, this increased authorization would still not cover highly technical facilities. The ANSF maintenance effort would still have to be augmented with more highly skilled personnel executing O&M on power generation and water distribution systems.

Unfortunately, MOI has decided they will not increase the tashkil authorization for maintenance of ANP facilities. CSTC-A recommended and attempted to persuade the ANP to increase their O&M authorizations. Although MOI acknowledged there was a need to increase the number of personnel to maintain ANP facilities, the ministry did not improve the recommended increase (SIGAR 2012, 6).

After receiving feedback about the availability of trainees, CSTC-A officials and MOD developed a plan to ensure personnel was available for training. MOD approved a directive on December 28, 2011. The directive centralized training of infrastructure O&M for the ANA. It recognized the Construction and Property Maintenance Directorate Chief as the official authority for facilities maintenance training for all of Afghanistan. The directive also placed responsibility on the chief to provide training for all O&M personnel (SIGAR 2012, 8). However, there has not been any feedback made available as to the effectiveness or the implementation timeline for this directive.

Another challenge for ITAG was the inability of ANSF to recruit qualified personnel to fill the positions authorized by the tashkil. One of the primary issues with filling tashkil authorizations is the lack of qualified human capital throughout Afghanistan. In addition, those individuals that do have experience and capabilities executing basic trades required to execute O&M are hired by contractors. Contractors do offer higher wages, but even contractors find that many individuals they hire can only perform very basic repairs (SIGAR 2012, 6).

According to a USACE special report in 2010, Afghan has been drained of its technically educated individuals. Afghans lack knowledge in engineering, geology and construction. Many individuals also have left the country and are wary to return (Affleck 2010, 14). This has a severe impact on the capacities of the potential work force for any construction or facilities O&M and management. As many reports and studies have stated, there is a low level of qualified personnel for executing most facilities maintenance with any technical complexity.

#### Exelis

In order to support O&M, as ANSF infrastructure was being completed and occupied by security forces, in July 2010, USACE developed two fixed price contracts for operations and maintenance of existing and future ANSF infrastructure. One of these contracts, contract W912ER-10-D-002, was for northern Afghanistan's ANSF infrastructure, while W912ER-10-D-003 covered O&M for southern Afghanistan's ANSF facilities. W912ER-10-D-002 was valued at \$450 million, while W912ER-10-D003 was for \$350 million. USACE awarded both of these contracts to Exelis, although

under separate bid proposals and independent of each other. Both of these contracts were for a base year plus four option years (SIGAR 2012, 2).

Both contracts were to provide maintenance to existing ANSF infrastructure and future constructed facilities. In addition to providing services, the contracts required Exelis to provide training for vocational training to ANSF O&M personnel in various trades. According to DODIG 2012-104, the trades included, “heating, ventilation, and air conditioning; electrical; carpentry; welding; painting; plumbing; and masonry.” During the contracts first year, \$4.2 million was obligated to training from the overall contract. The contractor charged the government approximately \$3 million for training ANSF personnel (Inspector General 2012, 3).

The amount obligated for training during the initial year was only 5.6 percent of the total value of the contract for the base year. Clearly, the main purpose of the contracts was maintenance of the facilities. Based on the value of the contract allocated for training, the contractor obviously focused on maintaining ANSF infrastructure not developing ANSF capabilities. The priority for training seemed low, particularly during the base year, as USACE was focused on ensuring the newly completed infrastructure did not go into a state of disrepair.

The USACE focus on O&M as opposed to developing capacity within the ANSF is understandable. Prior to the awarding of the two contracts to Exelis, USACE provided O&M to ANSF facilities under seven separate contracts. The companies that were awarded the previous contracts did not perform well. For example, USACE decided not to exercise any option years for the company maintaining ANP facilities prior to the Exelis contracts due to the previous company’s poor performance. USACE chose to

develop a completely new contract to ensure O&M services rather than continue with the company's lackluster O&M (SIGAR 2012, 2).

Exelis did develop two training programs; one in the north and one in the south. As of June 2012, Exelis had established training sites at 21 ANSF locations in the south and 6 ANA locations in the north. However, the focus of the training was on basic O&M skills. The training did include classroom and practical application of basic trades as outlined in the two contracts. Only 66 students had completed training at the 21 sites with an additional 602 students enrolled at the various training sites.

### Projected Funding

In the Chicago Summit Declaration on Afghanistan stated that the projected annual budget after 2014 for ANSF would be \$4.1 billion, while GIRoA would provide \$500 million for ANSF beginning in 2015. The declaration reaffirmed the international community's commitment to sustaining a capable ANSF in order to establish security in Afghanistan. NATO committed to providing \$4.1 billion dollars based on an ANSF force of 228,500 (NATO 2012).

Afghanistan's fiscal future does not look promising without foreign assistance. Figure 2 shows the total core projected financing gap for Afghanistan through FY 2021. This figure shows the overall gap and includes projected revenue growth for Afghanistan through tax revenues, customs duties and predicted mining revenues versus projected expenditures for security, civilian operations and development programs. Although revenues are expected to grow, so are costs. The gap can be reduced if aid is provided in order to augment the revenues generated by GIRoA (World Bank 2012b, 57-59).



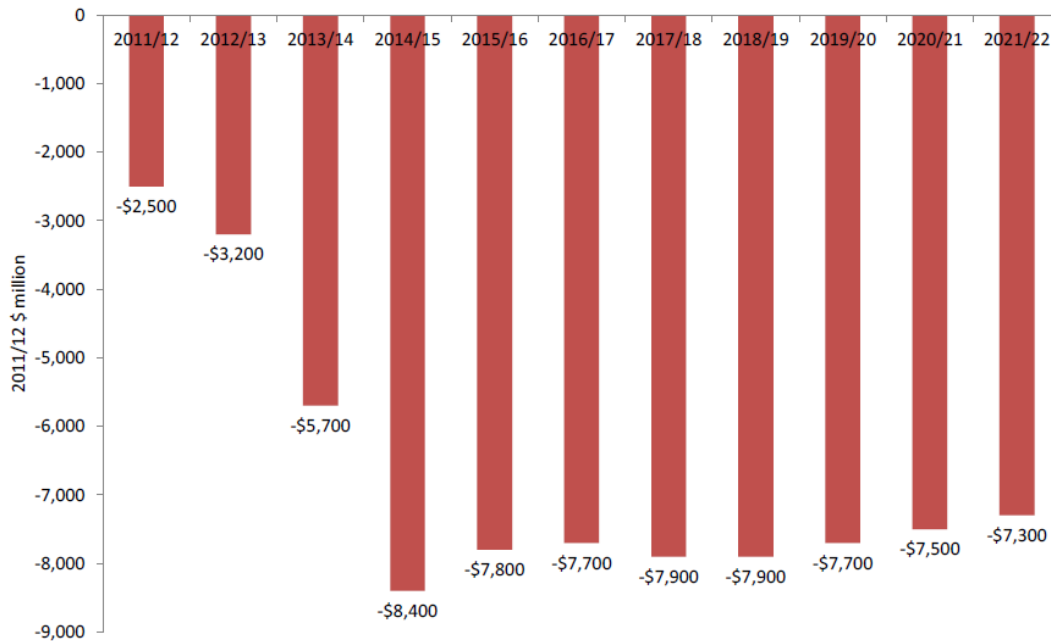


Figure 2. Total Core Financing Gap (in 2011/12 U.S. millions of dollars)

Source: World Bank, *Afghanistan in Transition: Looking Beyond 2014*, vol 2 (Washington, DC: World Bank Open Knowledge Repository, May 2012), 54.

### Summary: Identify the Gap in Capacity and Funding

#### Capacity and Training

Despite extensive efforts from NTM-A/CSTC-A, USACE and ITAG, there is a projected gap in the capacity of ANSF personnel to maintain ANSF infrastructure. The lack of human capital, ITAG's reduction in numbers and the delay by Exelis in establishing O&M training as directed by the northern and southern Afghanistan O&M contracts were three contributing factors to the projected shortage in ANSF.

Unfortunately, clear, comprehensive and reliable metrics for measuring capacity and training do not exist. However, by taking an all inclusive look at the available data it is

possible to see their will most likely be a deficiency in ANSF O&M capacity and training after 2014.

One of the quantifiable shortfalls is the inability of Exelis to establish training at 40 sites. The lack of training sites began during the base year of the contract. Exelis was required to establish 18 sites by April 2011. However, as of April 2011 only nine training sites were established (see table 1). Additionally, USACE did not include specific metrics in the performance measures of the contract. Therefore, it was not feasible to assess the quality of vocational training at any of the sites once established (Inspector General 2012, 7-10). As of June 2012, Exelis had only established 27 training sites. After two years into the contract, Exelis still had not been required to establish 13 of the sites originally required by the contract.

ITAG was not able to implement its original strategy due to a drastic shortage in the amount of personnel they expected to have. Originally ITAG expected to have 222 military members to train and mentor ANSF O&M infrastructure personnel. The highest number of personnel on ITAG rolls was 116 in December of 2011. This number dropped drastically to 63 by September 2012 (SIGAR 2012, 8). Thus, ITAG reduced the number of ANSF sites at which they would train and mentor. The largest known number of sites with ITAG presence was 32 in September 2011. Originally, ITAG's strategy for transition of O&M to the ANSF called for ITAG presence at 115 sites. That left 72 percent of the planned sites without ITAG mentorship.

NTM-A/CSTC-A has recognized the gap in O&M capacity within the ANSF. A CSTC-A official acknowledged that the current training programs would not produce enough capacity in the ANSF to provide adequate O&M after 2014. In order to be able to

transfer nearly 8,000 buildings and structures to the ANSF, new initiatives need to be developed to augment the shortages in training. The new initiatives should enhance the programs already in place through Exelis and ITAG (Inspector General 2012, 10).

Along with O&M capacity shortages at the ANA corps and brigade levels, there is a lack of contracting knowledge at the MOI and MOD level. According to the December 2012 Report on Progress to Security and Stability in Afghanistan, “The MOI Facilities Department currently lacks the capacity to contract for facility operations and maintenance for the vast number of permanent infrastructure facilities and transitioned coalition bases...” In lieu of qualified personnel within the ANSF, contracts could augment the GSU’s O&M efforts throughout Afghanistan. Contracting capacity affords GIRoA another method to ensure ANSF infrastructure is properly maintained. In October 2012, NTM-A/CSTC-A established Contracting Advise and Assist Teams (CAAT) to assist MOI and MOD in developing contracting capacity. The teams are composed of military and civilian personnel with contract experience. The task for these teams to develop contracting capacity at the ANA corps and brigade level (U.S. Congress 2013, 6).

Based on personal experience at the tactical and operational level in Afghanistan, the author recognizes that construction efforts are extremely challenging in Afghanistan. Planning and execution of any construction project is difficult due to varied external factors in Afghanistan. Building O&M capacity in the country and specifically within the ANSF has proven to be equally if not more challenging than building facilities. Despite monumental efforts by USACE and ITAG, there is still a projected shortage in O&M capacity.

## ANSF End Strength

The future requirement for ANSF infrastructure O&M is directly related to the total number of ANSF. As of April 30, 2013, the ANSF was 20,000 people short of the targeted end strength goal of 352,000. The ANSF force strength was 332,753 in February 2013. This is a decrease of 4,753 people compared to the same period in 2012. This difference is attributed to the fact that 2012 figures included civilian personnel supporting the ANSF, and the 2013 figures did not include civilian personnel (Bacon 2013). There are recruiting efforts in place to continue building ANSF numbers. However, any reduction in ANSF numbers reduces the amount of O&M that has to be performed.

The long term end strength for the ANSF is also projected to change to 228,500 by 2017. NATO leaders agreed to this change in total ANSF at the Chicago Summit in May 2012 (Bacon 2013). The long term projected ANSF end strength is 35 percent smaller than the targeted ANSF strength and 31 percent smaller than the current strength. If the number of ANSF reduces to 228,500 by 2017, as has been agreed upon, there would be a significantly smaller requirement for ANSF infrastructure O&M capacity. A reduction of the O&M requirement would reduce the projected gap in capacities versus requirements.

## Funding Gap

According to Government Accountability Office (GAO) report GAO -13-218SP, Afghanistan's projected revenues through FY 2015 will not cover the costs of ANSF operations. The projected cost to continue developing ANSF even after an official transfer of security responsibility would be no less than \$25 billion. The \$500 million GIRoA pledged for ANSF operations would equate to 14 percent of its GDP. Even if

Afghanistan were to pledge its entire GDP to the ANSF, the amount would still be 25 percent short of the total expenditures required to sustain the ANSF (Government Accountability Office 2013, 21-22). Figure 3 shows the projected shortages for ANSF funding through 2017.

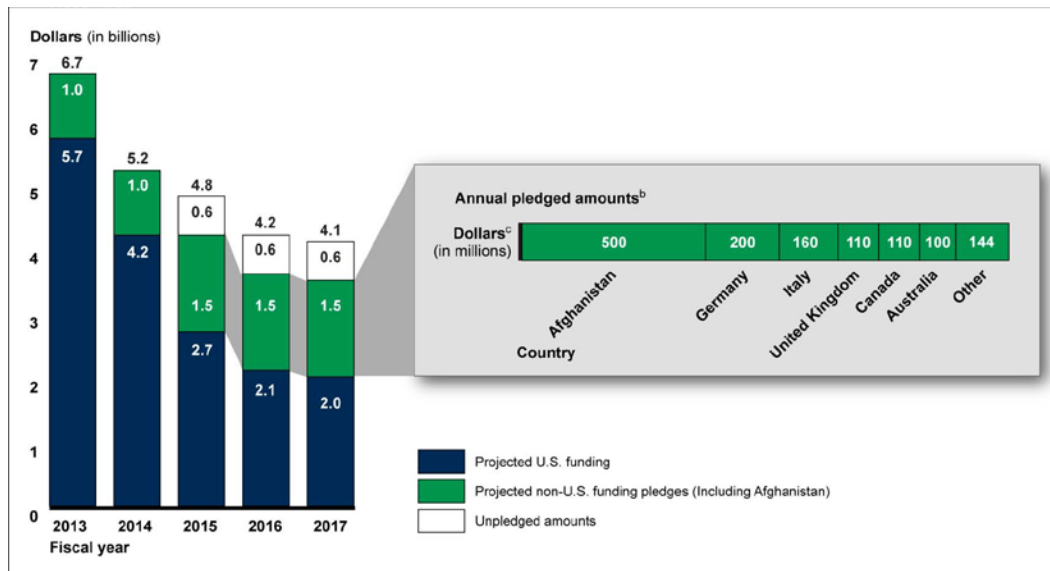


Figure 3. Projected Shortages in ANSF Funding

Source: Government Accountability Office, *Afghanistan, Key Oversight Issues* (Washington, DC: Government Printing Office, February, 2013), 22.

The World Bank also predicts a shortage in funds through FY 2021. Beginning in 2017, security O&M costs will be approximately \$3.5 million.<sup>16</sup> This cost does not include security personnel salaries. It does, however, encompass O&M costs for all

<sup>16</sup> In this instance the World Bank staff calculations defines O&M as the operation and maintenance of the entire force. It does include costs for maintaining ANSF infrastructure. However, this sum takes into account equipment maintenance, fuel, and contractor services along with any other requirements.

infrastructure and equipment (World Bank 2012b, 55). If the overall size of the ANSF remains at the levels that were agreed upon during NATO's Chicago Summit, there will need to be foreign assistance to support the ANSF. Other critical services would be severely crippled if Afghanistan were to fund the cost of O&M for ANSF on its own. Therefore, it is imperative for Afghanistan to continue receiving foreign aid for its security requirements through 2021.

The projected shortages in expenditures versus revenues in Afghanistan would obviously affect funds for ANSF infrastructure O&M capacity. Even if fully trained personnel exist within ANSF ranks, a funds shortage would affect spare parts stockades and tool purchases. Additionally, the personnel with technical skills would most likely find higher paying jobs in or outside of Afghanistan.

## CHAPTER 5

### CONCLUSIONS AND RECOMMENDATIONS

#### Conclusions

In a June 27, 2010 interview on ABC's "This Week," then CIA director Leon Pannetta stated, "Winning in Afghanistan is having a country that is stable enough to ensure that there is no safe haven for Al Qaida or for a militant Taliban that welcomes Al Qaida. That's really the measure of success for the United States." One of the keys to reaching stability in Afghanistan is establishing a secure environment in order to promote prosperity within the country. The key component for establishing security is the ANSF. In order to ensure the success of the ANSF, they must have facilities from which to operate and train. The U.S. government has ensured that the ANSF have quality garrisons, logistics hubs and training areas. However, it is up to GIRoA to ensure these facilities are operated and maintained properly after NATO forces transition security operations to the ANSF at the end of 2014.

The primary question investigated in this thesis was can GIRoA maintain, operate and sustain the ANSF's critical infrastructure after NATO's transfer of security operations in 2014? The answer is no, unless GIRoA continues to receive assistance from the international community after 2014. USACE and NTM-A/CSTC-A must continue to implement the initiatives that have succeeded in developing ANSF infrastructure O&M capacity. The efforts must take a comprehensive approach. With continued mentorship from the ministry level to the GSUs, the ANSF can overcome the challenges identified in this study. In order to accomplish this, secondary questions must be answered.

1. What critical capabilities must GIRoA possess or develop in their country and within the ANSF to ensure ANSF facilities can be maintained?

There are two critical capabilities the GIRoA must have to ensure ANSF facilities can be maintained: qualified personnel and funding specifically for O&M activities.

GIRoA must have qualified personnel to execute O&M on ANSF facilities. At this time, there are not enough qualified personnel to execute O&M. Despite several programs developed by USACE in conjunction with NTM-A/CSTC-A, there has not been enough capability generated within ANSF ranks to ensure adequate O&M can be executed.

Outside of Kabul and provincial major capitals, there are not very many skilled tradesmen or experienced workers. Additionally, those individuals that do have skills are hired by contractors. The contractors pay higher wages and attract qualified personnel.

Difficulties in recruiting personnel have also impacted GIRoA's ability to develop maintenance personnel. Not only are there very few qualified personnel available for incorporating into the ANSF for O&M, both MOI and MOD have had trouble filling their authorized positions with any personnel. As of September 2012, MOD had only filled 41 percent of their allotted positions. Meanwhile, MOI has been even less successful. MOI had only filled 31 percent of their authorized positions. Without an increase in the number of personnel, neither the MOI nor MOD will be able to maintain their infrastructure regardless of the quality of personnel.

Other factors affecting the ability GIRoA to develop capabilities within the ANSF were not caused by GIRoA. For example, the construction plan developed by NTM-A/CSTC-A was not tied to the strategic needs of the ANSF at the onset major infrastructure development. Facilities were built at various locations without considering



the mission of the unit that would occupy the location. Little consideration for O&M of the facilities was taken into account.

Some of the infrastructure built during the early stages of ANSF infrastructure was constructed to western standards. The ANSF did not need some of the amenities that were incorporated in the original designs of many structures. Not only were they not necessary, but maintaining more technically advanced infrastructure is more difficult for Afghans. For example instead of providing fans, some buildings had central cooling systems. The cost and technical knowledge necessary to maintain a building with central cooling/heating is much higher than maintaining a ceiling fan and a wooden stove. USACE and NTM-A/CSTC-A has implemented initiatives to ensure construction is easily sustainable by the ANSF. However, the need for maintaining all of the infrastructure remains.

Compounding the problem is GIRoA's inability to sustain ANSF expenditures with internal funds. The only way to ensure enough funds are available to execute O&M on ANSF infrastructure is to ensure NATO allies continue to provide aid to Afghanistan. NATO has pledged to continue funding the ANSF through 2017 but there have been no pledges or commitments made to GIRoA for security expenditures past 2017.

2. What is the ISAF or GIRoA plan to ensure there is a program in place to fill the gap between required capabilities and shortfalls in Afghan O&M of ANSF infrastructure?

The plan to ensure a program is in place includes training the ANSF to assume O&M responsibilities. MOI and MOD from GIRoA are being incorporated into the training programs developed by NTM-A/CSTC-A. Most of the current training is still led primarily through USACE and NATO elements. However, as transition looms, the ANSF

are being trained to assume O&M responsibilities. The training programs currently in place will not build sufficient capacity for long term maintenance, but more initiatives are being developed to continue to close the gap between the requirements for O&M capacity and the projected capacity within the ANSF. In order for the ANSF to be able to sustain their facilities, all of the initiatives must continue to build capacity within all of GIRoA.

VTTC has produced two graduating classes for ANSF O&M. The school is an example of a successful venture for developing the capabilities of the ANSF. The school has only produced 116 graduates from these two classes. However, the quality of training is comprehensive. Each student is fully dedicated to learning their trade or skill. The school affords the students the ability to immerse in developing the requisite skills to learn O&M of ANSF facilities without having to be tasked by ANSF commanders with other operational requirements. VTTC has proven to be a force multiplier because the singular focus is developing a highly skilled individual before that ANSF member is sent out to the operational environment.

The other two entities that are responsible for developing capabilities within the ANSF are Exelis and ITAG. ITAG is comprised of military personnel whom are responsible for mentoring and training the GSUs at various ANSF sites. Exelis is a contractor that takes direction from USACE and works in ITAG at some ANSF sites. ITAG has been somewhat limited in implementing training due to the reduced personnel numbers in relation to the O&M training mission. ITAG was only able to establish their footprint in 32 ANSF sites. Originally, ITAG's strategy for developing O&M capacity within the ANSF called for ITAG to establish teams at 115 sites. However, they had to adjust their strategy after not having the personnel required to execute the original plan.

Exelis was required to establish 40 training sites where ANSF personnel would learn basic maintenance skills. As of June 2012, Exelis had established only 27 sites. They were also training approximately 600 personnel during the same timeframe. This was less than half of the of the assigned personnel to the GSUs of both the ANA and the ANP. Moreover, this is only approximately 29 percent of the total authorized number of O&M personnel.

3. What additional recommendations does the author suggest to increase O&M capabilities for ANSF facilities? This question is answered in the following section of this study.

### Recommendations

#### Recommendation #1-Recruiting

One of the most glaring challenges for GIRoA is finding qualified personnel to fill GSU positions for both the ANA and ANP. The MOI and MOD should concentrate their recruiting efforts on hiring personnel that currently work for contractors in Afghanistan. As construction slows down, many laborers hired by sub-contractors will be available. These individuals have learned trade skills or enhanced their skills during the vast reconstruction effort in Afghanistan. In addition to hiring experienced workers, GIRoA should launch a recruiting campaign at civilian trade schools. There are 25 trade vocational schools in Afghanistan. The trade schools teach a variety of trades, not just those related to construction or O&M. However, they can be a source of human capital for ANSF infrastructure O&M.

### Recommendation #2-Expand VTTC Enrollment

VTTC has been successful in training personnel. Although the first two classes only had 60 students each, the students received six months of training based on curriculum specifically designed to prepare them for maintaining ANSF infrastructure. When VTTC was first created, the plans were for the school to eventually be able to enroll 150 people into each class. This change needs to be implemented immediately. This school is a direct source to ANSF O&M and produces graduates with the requisite skills to immediately increase maintenance capabilities.

### Recommendation #3-Continue to Develop Capacity in MOI and MOD

One of the key components of this study was the O&M contract created by USACE to maintain ANSF infrastructure until facilities were transferred to the ANSF. Attempting to provide O&M through the U.S. military was not feasible. The solution to that problem set was to create a contract to fill a need our forces could not meet.

This concept should be applied while the ANSF develop internal O&M capacities. However, MOI and MOD are in the developmental stages of contracting capacity. Most of the current contracts supporting GIRoA have been established by a NATO nation. MOI and MOD have not had to develop that capacity. CAAT will be an important initiative to ensuring there is contracting capacity at the ANA corps level and below and at the ANP provincial level and below. However, MOI and MOD should establish an Afghan led national O&M contract to bridge the shortages in personnel in their the ANSF

GSUs. Not only would this contract help solve the pending capacity shortage; it would also place the responsibility for O&M of ANSF infrastructure at the ministry level.<sup>17</sup>

#### Recommendation #4-Develop O&M Training Contract

The current contracts executed by Exelis do not focus on training. USACE should develop a contract that focuses on training ANSF. Exelis should be held to the training requirements in accordance with the two existing O&M contracts. However, a contract specifically directing the contractor to provide training to ANSF O&M personnel would accelerate training in the GSUs. This initiative, in conjunction with recommendation #3 of this study, would address both training and current capacity shortages.

The O&M training contract must have highly developed performance measures in the performance work statement (PWS) and in the actual contract. The wording of the contract would have to specify the number of personnel that the contractor must train and the locations where the training must occur. The contracting language would also have to specify what type of training needed to be performed. It may be useful for the contract to include performance measures that assess the training, mainly the knowledge and skills gained by the training participants.

#### Recommendation #5-Establish A-ITAG

ITAG is a great concept for incorporating highly technical skills in a small group of people. The author believes had ITAG's numbers not been drastically reduced, ITAG would have had a significant impact on building ANSF infrastructure O&M capacity.

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<sup>17</sup>As was discussed during chapter 4 of this study, there is a shortage in the projected funding for the ANSF. The contract should be funded from on budget funds.

The recommendation is to establish an Afghan Infrastructure Training Advisory Group (A-ITAG). The A-ITAG should be added to both the ANA and ANP Tashkils. Ideally, they would be trained by ITAG prior to ITAG's departure from Afghanistan. There would be a total of 11 A-ITAGs. The recommendation is for there to be one A-ITAG per ANA corps and one A-ITAG per AUP regional command. The A-ITAG mission would be to assess current capacities for the corps and brigade GSUs and then develop training plans for the GSUs of their respective responsibility sectors. They would be considered the lead trainers for ANSF O&M personnel.

The A-ITAGs would have to be able to train ANSF personnel on facilities management, horizontal construction and vertical construction. Facilities management would entail management of all services that relate to the function and operation of a building including managing the maintenance process for a facility. The A-ITAG has to be able to train on the existing maintenance system used by ANSF to repair infrastructure. For actual repair training the A-ITAG would have skilled electricians, carpenters and plumbers. The repair training personnel would have to be able to blueprints and plans so they could train GSUs on reading schematics when a repair issue arises. If developed, the A-ITAG could be an enduring presence in the ANSF and continue building O&M capacity in the GSUs.

### Closing

The U.S. and other NATO allies have invested considerable resources to stabilize Afghanistan. The investment in the ANSF to ensure they can provide security for all Afghans comprises a substantial amount of that investment. One of the important enablers for sustaining the ANSF is having adequate facilities for training, living and

administrative activities. USACE and NTM-A/CSTC-A have exerted a significant effort to ensure the ANSF can provide O&M to their infrastructure. The ANSF can sustain their infrastructure with continued development of their capabilities and with continued funding from all of the NATO allies.

### Future Research

The author recommends any future research on this subject be focused on the effectiveness of all the initiatives discussed in this thesis. The best data would be available five years after the transfer of all ANSF infrastructure is complete. By 2020, there would be a large amount of data points. The research could determine the capacity for ANSF infrastructure O&M from a historical perspective. There would also be a great deal of lessons learned for developing ANSF infrastructure O&M. This would provide the researcher a large amount of published documents to complete a worthy research project.

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